

REMARKS

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 112, are respectfully requested in light of the following remarks.

Upon entry of the foregoing amendments, Claims 1-28 will be in this application.

Claims 21-28 have been added.

Claims 10 and 17 have been amended to recite a two component composition; to recite the identity of each of the components; and to include the term blocking agent to describe the five-membered nitrogenous aromatic heterocycle. Support for these amendments is found at least on page 12, lines 7-12 and page 16, lines 8-10 of the specification. Claims 12 and 13 have been amended to recite proper claim language, to delete the phrase "of aromatic nature" and to recite that the heterocycle is aromatic. Support for these amendments is found in the previous version of these claims. Claim 16 has been amended to delete the phrase "of aromatic nature" and to recite that the heterocycle is aromatic. Support for these amendments is found in the previous version of this claim. Claims 18 and 19 have been amended to a two-component system. Support for these amendments is found at least on page 16, lines 8-10 of the specification. Claim 19 has also been amended to correct a typographical error. Claims 19 and 20 have also been amended to properly recite the time unit of an hour.

Newly added claims 21-28 recite methods of preparing the compositions of claims 10-17. Support for these new claims is found in claims 10-17 and on page 16, lines 8-10 of the specification.

No new matter has been added in making these amendments.

Specification

The Office Action notes that the use of trademarks, such as CMI 1415, is found in the application and that they should be capitalized and be accompanied by the generic terminology.

Applicants note that when trademarks have been used in the specification, they appear to have been accompanied by a description of the material. With regards to CMI 1415, applicant's representative has not been able to determine that a trademark has been issued for such a product. Applicants believe that absent such a determination, it would not be proper to indicate such a trademark. Applicants note that the term CMI 1415 was used after the generic description of the compound 2-ethylimidazole, which is a recognized product.

35 U.S.C. §112 first paragraph Rejections

1. Claims 10-20 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

The Office Action states:

Page 6, lines 3-11 states that imidazoles substituted in the 4 or 5 or 4,5 positions are examples of blocking agents of the claimed invention.

However, these compounds would not meet the limitations of claims 10, 11 or 17 that require the hydrocarbon chain to be in the 2 position.

Applicants respectfully submit that claims 10 and 17 do not require the hydrocarbon chain to be in the 2-position. In addition, applicants direct the Examiner to page 6, lines 3-11, cited above in the Office Action, which read:

Mention may be made, as examples of blocking agents which can be used in the present invention, of:

- imidazole and its derivatives monosubstituted in the 2, 4 or 5 position, such as 2- or 4-methyl-, 2-ethyl-, 2-propyl-, 2-isopropyl-, or 2- or 4-phenylimidazole,
- derivatives disubstituted in the 2,4, 2,5 or 4,5 positions, such as 2-ethyl-4-methylimidazole or 4-methyl-5-hydroxymethylimidazole or 4-methyl-2-phenylimidazole or ethyl 4-methyl-5-imidazole-carboxylate,
- derivatives trisubstituted in the 2,4,5 positions, such as 2,4,5-triphenylimidazole.

The above portion of the specification clearly demonstrates support for the hydrocarbon chain being in the 2-position of the 5-membered nitrogenous aromatic heterocycle.

Applicants therefore request withdrawal of this rejection.

2. Claims 10-20 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

The Office Action states:

Page 8, lines 25-26 states that an arylenedialkylene diisocyanate may be used in the claimed invention. However, this would not meet the limitation of claim 10 of an aliphatic isocyanate.

Claims 10-20 require the presence of an aliphatic isocyanate. Page 7, lines 30-33 states:

As was mentioned above, the isocyanates for which the invention is most advantageous are aliphatic isocyanates, that is to say those in which the nitrogen atom is bonded to a carbon of sp^3 hybridization.

Page 8, lines 25-26 recite:

Mention may also be made of arylenedialkylene diisocyanates, such as $OCN-CH_2-\text{Ø}-CH_2-NCO$.

Applicants have defined an aliphatic isocyanate as an isocyanate in which the nitrogen atom is bonded to a carbon of sp^3 hybridization. Under this definition, an isocyanate of formula $OCN-CH_2-\text{Ø}-CH_2-NCO$ would be encompassed within claim 10.

Applicants therefore request withdrawal of this rejection.

3. Claims 10-20 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action notes that the acronyms on page 16 are not defined and therefore the meaning of HDB, HR, DMP and HDT is not clear.

Applicants direct the Examiner to page 15 of the specification, where lines 13-14 describe the use of Tolonate® HDT; and line 16 describes the use of Tolonate HDT HR. With regards to "DMP" the table on page 16 recites "3,5-DMP", which is described on page 15, line 18 as being 3,5-dimethylpyrazole. With regards to HDB, one of ordinary skill in the art, realizing that HDT and HDT HR are designations for various Tolonate®, would also understand that HDB is an acronym for Tolonate® HDB, which is a viscous

solvent-free aliphatic polyisocyanate, based on an HDI biuret (HDI: hexamethylene diisocyanate).

Applicants therefore request withdrawal of this rejection.

35 U.S.C. §112 second paragraph Rejections

Claims 10-20 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

a. The Office Action indicates that claims 10, 12, 13, 16 and 17 are not clear due to the use of the term "aromatic nature." The Office Action indicates that it is not clear if this is different from "aromatic."

Claims 10, 12, 13, 16 and 17 have been amended to delete the term "aromatic nature" and to recite "aromatic heterocycle", rendering this rejection moot.

b. The Office Action indicates that claims 10 and 17 are not clear as the term "type" is vague and indefinite.

Claims 10 and 17 have been amended to delete the term "type", rendering this rejection moot.

c. The Office Action indicates that claim 14 is not clear as the term "several" is not defined and is therefore vague.

Claim 14 has been amended to delete the term "several" and recite "a plurality of", rendering this rejection moot.

d. The Office Action indicates that Claims 10 and 17 are not clear as to whether the open valence of the chemical structure means the hydrocarbon is attached here or not.

Claims 10 and 17 have been amended to clarify the structure. The open valence on the two nitrogen atoms in -N(H)-C(-)=N- indicates the location where the other two members of the five-membered nitrogenous aromatic heterocycle are located. The hydrocarbon chains are not attached at these locations. The hydrocarbon chain may be attached onto the carbon atom between the nitrogen atoms.

e. The Office Action indicates that claim 14 is not clear as the term "several" is not defined and is therefore vague.

Claim 14 has been amended to delete the term "several" and recite "a plurality of". Page 4, lines 1-4 of the specification states "In addition, it can comprise other blocking agents than those corresponding to the definition of the nitrogenous heterocycle." Therefore at least one of the blocking agents must be a five-membered nitrogenous aromatic heterocycle that meets the requirements of claim 10, while additional blocking agents are not required to comprise a five-membered nitrogenous aromatic heterocycle. Applicants therefore request withdrawal of this rejection.

f. The Office Action indicates there is no antecedent basis for "blocking agent" for claim 14.

Claim 10, from which claims 14 depends, has been amended to recite a blocking agent", rendering this rejection moot.

g. The Office Action indicates for claim 17, it is not clear what is meant by "partially aliphatic".

Claim 17 recites an at least partially aliphatic isocyanate. The specification teaches that the term isocyanate includes isocyanate monomers, dimers and trimers. (See page 7, line 30 - page 11, line 1.) The term aliphatic isocyanate is defined as isocyanates "in which the nitrogen atom is bonded to a carbon of sp^3 hybridization." (page 7, lines 31-33) Because the term isocyanate includes various forms in addition to a monomer, the term "partially aromatic" refers to the requirement that the isocyanate, in whatever form, have at least one isocyanate function in which the nitrogen atom is bonded to a carbon of sp^3 hybridization. Therefore, in a dimer or trimer, at least one of the isocyanate functions must have the nitrogen of the isocyanate bound to a carbon atom that is bound to three other atoms (i.e. a carbon atom having sp^3 hybridization). The specification demonstrates that this term particularly and distinctly points out the subject matter which applicant regards as the invention. Applicants therefore request withdrawal of this rejection.

h. The Office Action indicates that claim 18 is indefinite because a coating itself, not a coating composition or a coated material, is being claimed and a coating is associated with the article coated.

Claim 18 has been amended to recite "A coating composition", rendering this rejection moot.

Applicants therefore request withdrawal of these rejections under 35 U.S.C. §112, second paragraph.

Claim Objections

Claim 20 is objected to as lacking a period.

Claim 20 has been amended to add a period.

Applicants therefore request withdrawal of this objection.

35 U.S.C. §103(a) Obviousness Rejections

1. Claims 1-20 have been rejected under 35 U.S.C. §103(a) as unpatentable over JP 62-164049.

Applicants respectfully submit that these claims are not obvious over JP 62-164049 and that indeed all of the claims as amended are allowable.

To establish a *prima facie* case of obviousness, three basic criteria must be met. (MPEP 2143) First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

JP 62-164049 discloses a planographic printing plate in which a recording layer is produced using a composition comprising a polymer having an active hydrogen that can react with a block isocyanate, an isocyanate and a photothermal substance.

JP 62-164049 discloses 1,6-hexamethylene diisocyanate and a blocking agent having an imidazole group. JP 62-164049 does not disclose any information regarding two-component compositions and methods of using such compositions.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in JP 62-164049 to modify or combine the reference teachings to obtain a two component composition. Therefore, there is no suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. There is no reasonable expectation of success based on the teachings in JP 62-164049 that a two component composition could be prepared because JP 62-164049 is silent on a two component composition. There cannot be a reasonable expectation of success in obtaining the Applicants' invention when the cited

prior art does not provide any teachings regarding a required element in a composition and does not provide any teaching that the recited effects would result from application of the composition. Therefore there is no reasonable expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

JP 62-164049 does not teach or suggest the use of a two-component composition as required by the claims. Therefore, the prior art references, either alone or combined do not teach or suggest all the claim limitations.

Applicants respectfully submit that the claims are not obvious over JP 62-164049 and the rejection should be withdrawn.

2. Claims 10, 11 and 15-20 have been rejected under 35 U.S.C. §103(a) as unpatentable over Flosbach et al. (U.S. 6,013,326).

Flosbach describes coating compositions comprising hydroxy-functional methacrylate copolymers and free or blocked isocyanates. Flosbach teaches the isocyanates can be blocked using imidazoles. Flosbach teaches:

The coating compositions according to the invention contain one or more free or blocked polyisocyanates as component D). If blocked polyisocyanates are present, the coating compositions according to the invention are one-component (one-pack) coating compositions. If free polyisocyanates are present, they are formulated as two-component (two-pack) systems. (col. 4, lines 26-30) (Emphasis added)

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in Flosbach to modify or combine the reference teachings to obtain a two-component composition when using blocked isocyanates. In fact Flosbach teaches away from such a composition by the teach recited above. There cannot be a suggestion or motivation when the reference specifically teaches away from a claimed element. Therefore, there is no suggestion or motivation, either in the Flosbach to modify the reference or to combine reference teachings to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. There cannot be a reasonable expectation of success in obtaining the Applicants' invention when the cited prior art specifically teaches against using a two component composition, as recited above. Therefore there is no reasonable expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Flosbach does not teach or suggest a two component system when blocked isocyanates are used. As shown above, Flosbach teaches away from a required element. Therefore, the prior art references, either alone or combined do not teach or suggest all the claim limitations.

Applicants respectfully submit that the claims are not obvious over Flosbach and the rejection should be withdrawn.

3. Claims 10-18 have been rejected under 35 U.S.C. §103(a) as unpatentable over JP 60-040121.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in JP 60-040121 to modify or combine the reference teachings to obtain a two component composition. Therefore, there is no suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to obtain the invention of the instant application.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. There is no reasonable expectation of success based on the teachings in JP 60-040121 that a two component composition could be prepared because JP 60-040121 is silent on a two component composition. There cannot be a reasonable expectation of success in obtaining the Applicants' invention when the cited prior art does not provide any teachings regarding a required element in a composition and does not provide any teaching that the recited effects would result from application of the composition. Therefore there is no reasonable expectation of success in producing the applicants' invention based on the teachings in the cited prior art.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

JP 60-040121 does not teach or suggest the use of a two-component composition as required by the claims. Therefore, the prior art references, either alone or combined do not teach or suggest all the claim limitations.

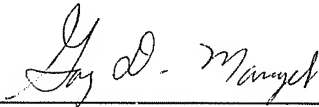
Applicants respectfully submit that the claims are not obvious over JP 60-040121 and the rejection should be withdrawn.

In view of the foregoing, it is believed that all record rejections are untenable and should be withdrawn. Further, favorable action in the form of a Notice of Allowance is believed to be next in order and is respectfully solicited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By: 
Gary D Mangels
Registration No. 55424

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620